Dell™ Inspiron™ 1470/1570 Service Manual

Model P04F and P04G series
Type P04F001 and P04G001

Notes, Cautions, and Warnings

 NOTE: A NOTE indicates important information that helps you make better use of your computer.

 CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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Module Cover

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Removing the Module Cover
Replacing the Module Cover

 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

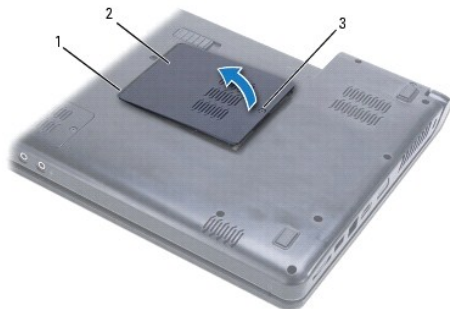
 CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

 CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Module Cover

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Loosen the captive screw on the module cover.

 NOTE: The location of the screw on the module cover may vary depending on the model of your computer.

4. Lift the module cover up at an angle to carefully disengage it from the computer base.

1	module cover tabs (2)	2	module cover
3	captive screw		

Replacing the Module Cover

1. Align the tabs on the module cover with the slots on the computer base and gently snap the cover into place.
2. Tighten the captive screw that secures the module cover to the computer base.
3. Replace the battery (see Replacing the Battery).

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Battery

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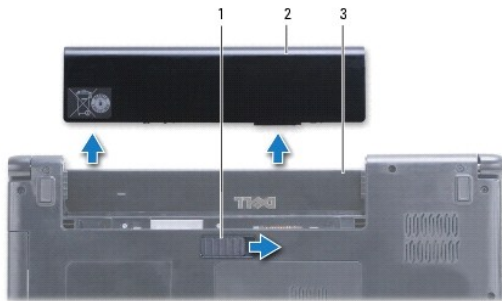
 CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

 CAUTION: To avoid damage to the computer, use only the battery designed for this particular Dell computer. Do not use batteries designed for other Dell computers.

Removing the Battery

1. Follow the procedures in Before You Begin.
2. Turn the computer upside down on a clean, flat surface.
3. Slide and click the battery release latch.
4. Slide the battery out of the battery bay.

1	battery release latch	2	battery
3	battery bay		

Replacing the Battery

Slide the battery into the battery bay until it clicks into place.

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Before You Begin

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This manual provides procedures for removing and installing components in your computer. Unless otherwise noted, each procedure assumes that the following conditions exist:

- You have performed the steps in Turning Off Your Computer and Before Working Inside Your Computer.
- You have read the safety information that shipped with your computer.
- A component can be replaced or—if purchased separately—installed by performing the removal procedure in the reverse order.

NOTE: This manual provides instructions for servicing the Inspiron 1470 and Inspiron 1570 computers. The majority of the instructions are the same for both computers, however your model may vary slightly in appearance.

Recommended Tools

The procedures in this document may require the following tools:

- Phillips screwdriver
- small flat-blade screwdriver
- plastic scribe
- BIOS executable update program available at **support.dell.com**

Turning Off Your Computer

CAUTION: To avoid losing data, save and close all open files and exit all open programs before you turn off your computer.

1. Save and close all open files and exit all open programs.
2. In Windows Vista®, click → → **Shut Down**.

   In Windows® 7, click → **Shut Down**.

   The computer turns off after the operating system shuts down.

3. Ensure that the computer is turned off. If your computer did not automatically turn off when you shut down the operating system, press and hold the power button until it turns off.

Before Working Inside Your Computer

Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your own personal safety.

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell is not covered by your warranty.

CAUTION: Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

CAUTION: When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

CAUTION: To avoid damaging the computer, perform the following steps before you begin working inside the computer.

1. Ensure that the work surface is flat and clean to prevent the computer cover from being scratched.
2. Turn off your computer (see Turning Off Your Computer) and all attached devices.
3. If the computer is connected to a docking device (docked), undock it. See the documentation that came with your docking device for instructions.

CAUTION: To disconnect a network cable, first unplug the cable from your computer and then unplug the cable from the network device.

4. Disconnect all telephone or network cables from the computer.
5. Eject any installed cards from the 7-in-1 memory card reader.
6. Disconnect your computer and all attached devices from their electrical outlets.
7. Disconnect all attached devices from your computer.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

8. Remove the battery (see Removing the Battery).
9. Turn the computer top-side up, open it, and press the power button to ground the system board.

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Flashing the BIOS

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To flash the BIOS, locate the latest BIOS update file for your computer at **support.dell.com**.

1. Ensure that the AC adapter is plugged in, the main battery is properly installed, and a network cable is attached.
2. Turn on the computer.
3. Go to **support.dell.com**.
4. Click **Drivers & Downloads**→ **Select Model**.
5. Select the type of product in the **Select Your Product Family** list.
6. Select the product brand in the **Select Your Product Line** list.
7. Select the product model number in the **Select Your Product Model** list.

NOTE: If you have selected a different model and want to start over again, click Start Over on the top right of the menu.

8. Click **Confirm**.
9. A list of results appear on the screen. Click **BIOS**.
10. Click **Download Now** to download the latest BIOS file.

    The **File Download** window appears.
11. Click **Save** to save the file on your desktop. The file downloads to your desktop.
12. Click **Close** if the **Download Complete** window appears.

    The file icon appears on your desktop and is titled the same as the downloaded BIOS update file.
13. Double-click the file icon on the desktop and follow the procedures on the screen.

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Internal Card With Bluetooth® Wireless Technology

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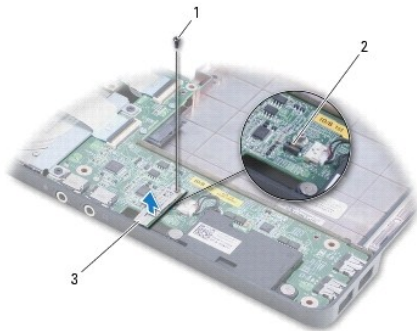
CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

If you ordered a card with Bluetooth wireless technology with your computer, it is already installed.

Removing the Bluetooth Card

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the optical drive (see Removing the Optical Drive).
4. Remove the module cover (see Removing the Module Cover).
5. Remove the Mini-Card (see Removing the Mini-Card).
6. Remove the power button cover (see Removing the Power Button Cover).
7. Remove the keyboard (see Removing the Keyboard).
8. Remove the palm rest (see Removing the Palm Rest).
9. Remove the screw from the Bluetooth card.
10. Lift the Bluetooth card to disconnect it from the USB/audio board.

1	screw	2	connector on the USB/audio board
3	Bluetooth card		

Replacing the Bluetooth Card

1. Align the connector on the Bluetooth card with the connector on the USB/audio board and press down to connect the Bluetooth card to the USB/audio board.
2. Replace the screw that secures the Bluetooth card to the USB/audio board.
3. Replace the palm rest (see Replacing the Palm Rest).
4. Replace the keyboard (see Replacing the Keyboard).
5. Replace the power button cover (see Replacing the Power Button Cover).
6. Replace the Mini-Card (see Replacing the Mini-Card).
7. Replace the module cover (see Replacing the Module Cover).
8. Replace the optical drive (see Replacing the Optical Drive).
9. Replace the battery (see Replacing the Battery).

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Camera

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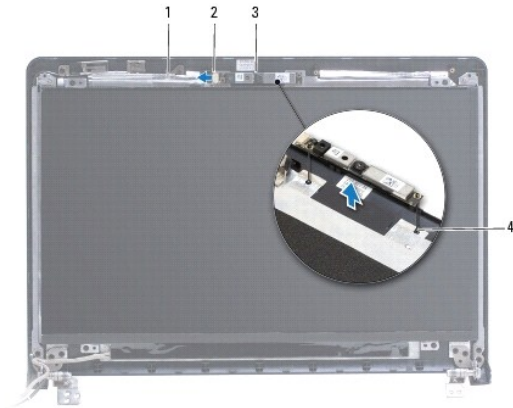
CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on the back of the computer).

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Camera

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the display assembly (see Removing the Display Assembly).
4. Remove the display bezel (see Removing the Display Bezel).
5. Disconnect the camera cable from the camera module.
6. Pull up on the camera module to disconnect it from the display cover.

1	camera cable	2	camera cable connector
3	camera module	4	alignment posts (2)

Replacing the Camera

1. Align the camera module using the alignment posts on the display cover.
2. Connect the camera cable to the camera module.
3. Replace the display bezel (see Replacing the Display Bezel).
4. Replace the display assembly (see Replacing the Display Assembly).

5. Replace the battery (see Replacing the Battery).

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Coin-Cell Battery

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 Removing the Coin-Cell Battery
 Replacing the Coin-Cell Battery

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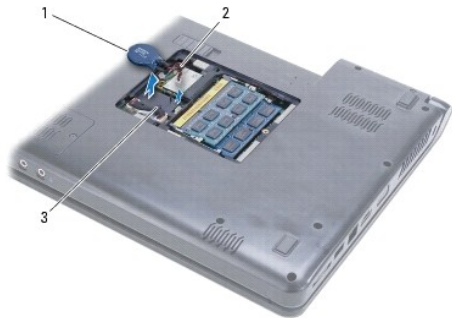
 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Coin-Cell Battery

1. Follow the procedures in Before You Begin.
2. Remove the module cover (see Removing the Module Cover).
3. Disconnect the coin-cell battery cable and remove the coin-cell battery.

1	coin-cell battery	2	coin-cell battery cable
3	tabs (2)		

Replacing the Coin-Cell Battery

1. Connect the coin-cell battery cable to the connector on the system board.
2. Place the coin-cell battery between the two tabs on the computer base.
3. Replace the module cover (see Replacing the Module Cover).
4. Replace the battery (see Replacing the Battery).

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Processor Heat Sink

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 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

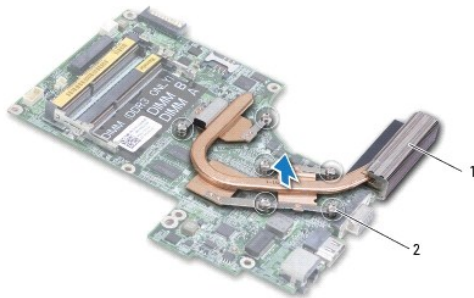
 WARNING: If you remove the processor heat sink from the computer when the heat sink is hot, do not touch the metal housing of the processor heat sink.

 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

 CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

 CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Processor Heat Sink

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the system board (see Removing the System Board) and turn it over.
4. In sequential order (indicated on the processor heat sink), loosen the six captive screws that secure the processor heat sink to the system board.

1	processor heat sink	2	captive screws (6)

5. Lift the processor heat sink off the system board.

Replacing the Processor Heat Sink

NOTE: The original thermal pad can be reused if the original processor and heat sink are reinstalled together. If either the processor or heat sink is replaced, use the thermal pad provided in the kit to ensure that thermal conductivity is achieved.

NOTE: This procedure assumes that you have already removed the processor heat sink and are ready to replace it.

1. Align the six captive screws on the processor heat sink with the system board and tighten the screws in descending order.
2. Replace the system board (see Replacing the System Board).
3. Replace the battery (see Replacing the Battery).

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Card Reader Board

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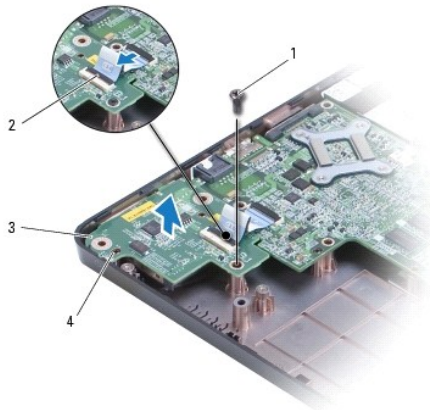
CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Card Reader Board

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the optical drive (see Removing the Optical Drive).
4. Remove the module cover (see Removing the Module Cover).
5. Remove the Mini-Card (see Removing the Mini-Card).
6. Remove the power button cover (see Removing the Power Button Cover).
7. Remove the keyboard (see Removing the Keyboard).
8. Remove the palm rest (see Removing the Palm Rest).
9. Remove the hard drive (Removing the Hard Drive).
10. Remove the left speaker (Removing the Speakers).
11. Disconnect the card reader cable from the from the connector on the system board.
12. Remove the screw that secures the card reader board to the computer base.
13. Lift the card reader board out of the computer base.

1	screw	2	card reader cable
3	card reader board	4	alignment posts (2)

Replacing the Card Reader Board

1. Align the card reader board using the alignment posts on the computer base.
2. Replace the screw that secures the card reader board to the computer base.
3. Connect the card reader cable to the connector on the system board.
4. Replace the left speaker (see Replacing the Speakers).
5. Replace the hard drive (see Replacing the Hard Drive).
6. Replace the palm rest (see Replacing the Palm Rest).
7. Replace the keyboard (see Replacing the Keyboard).
8. Replace the power button cover (see Replacing the Power Button Cover).
9. Replace the Mini-Card (see Replacing the Mini-Card).
10. Replace the module cover (see Replacing the Module Cover).
11. Replace the optical drive (see Replacing the Optical Drive).
12. Replace the battery (see Replacing the Battery).

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Display

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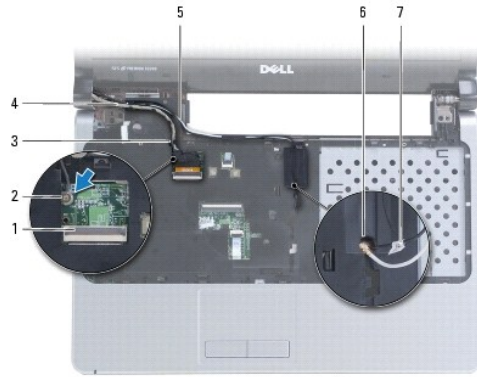
CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

 CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Display Assembly

Removing the Display Assembly

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the module cover (see Removing the Module Cover).
4. Disconnect the antenna cables from the Mini-Card (see Removing the Mini-Card).
5. Remove the two screws on the base of the computer that secure the display assembly to the computer base.

6. Remove the power button cover (see Removing the Power Button Cover).
7. Remove the keyboard (see Removing the Keyboard).
8. Disconnect the display cable and remove the screw from the system board.
9. Pull the Mini-Card antenna cables up through the slot in the computer base.
10. Note the routing of all the cables and remove them from their routing guides.

1	display cable connector	2	screw
3	display cable routing guides	4	display cable
5	Mini-Card antenna cables routing guides	6	slot in computer base
7	Mini-Card antenna cables		

11. Hold the display while you remove the three screws that secure the display assembly to the computer base.

12. Lift and remove the display assembly from the computer base.

1	screws (3)	2	display assembly
3	alignment posts (2)		

Replacing the Display Assembly

1. Using the alignment posts, place the display assembly in position and replace the three screws that secure the display assembly to the computer base.

2. Route the Mini-Card antenna cables and display cable through their routing guides.

3. Route the antenna cables through the slot in the computer base.

4. Replace the screw and connect the display cable.

5. Replace the keyboard (see Replacing the Keyboard).

6. Replace the power button cover (see Replacing the Power Button Cover).
7. Replace the two screws on the base of the computer.
8. Connect the antenna cables from the Mini-Card (see Replacing the Mini- Card).
9. Replace the module cover (see Replacing the Module Cover).
10. Replace the battery (see Replacing the Battery).

Display Bezel

Removing the Display Bezel

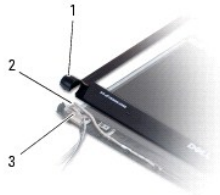
CAUTION: The display bezel is extremely fragile. Be careful when removing it to prevent damaging the display bezel.

1. Remove the display assembly (see Removing the Display Assembly).
2. Using your fingertips, carefully pry up the inside edge of the display bezel beginning with the bottom of the display bezel and working your way counterclockwise around the display.

1	display bezel

3. Remove the display bezel.

Replacing the Display Bezel

1. Place the curved part of the display bezel over the hinges and thread the cables through the left hinge.

1	curved part of the display bezel	2	cables
3	left hinge		

2. Align the display bezel over the display panel, and gently snap the display bezel into place.
3. Replace the display assembly (see Replacing the Display Assembly).
4. Replace the battery (see Replacing the Battery).

Display Panel and Cable

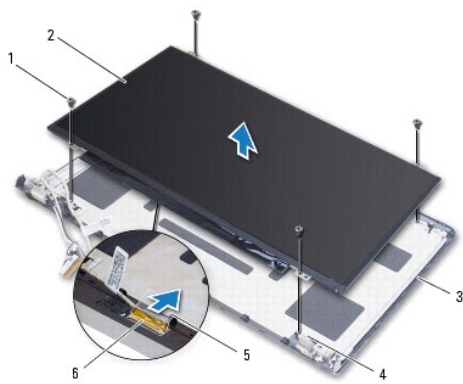
Removing the Display Panel and Cable

1. Remove the display assembly (see Removing the Display Assembly).

2. Remove the display bezel (see Removing the Display Bezel).

3. Remove the four screws that secure the display panel to the display cover, and raise the display panel at a angle to access the display cable.

4. Pull up on the clear pull-tab to disconnect the display cable from the display panel.

5. Remove the display panel.

1	screws (4)	2	display panel
3	display cover	4	alignment posts (4)
5	clear pull-tab	6	display cable

Replacing the Display Panel and Cable

1. Connect the display cable to the display panel.

2. Align the display panel using the alignment posts on the display cover.

3. Replace the four screws that secure the display panel to the display cover.

4. Replace the display bezel (see Replacing the Display Bezel).

5. Replace the display assembly (see Replacing the Display Assembly).

6. Replace the battery (see Replacing the Battery).

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Fan

Dell™ Inspiron™ 1470/1570 Service Manual

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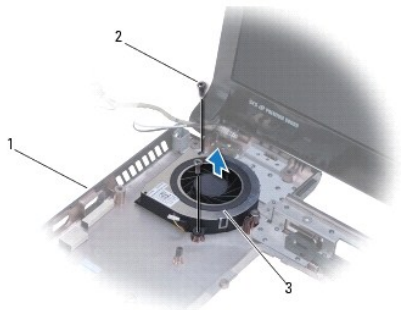
 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Fan

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the system board (see Removing the System Board). You do not need to remove the processor heat sink from the system board.
4. Remove the two screws that secure the fan to the computer base.

1	computer base	2	screws (2)
3	fan		

Replacing the Fan

1. Place the fan on the computer base.
2. Replace the two screws that secure the fan to the computer base.
3. Replace the system board (see Replacing the System Board).
4. Replace the battery (see Replacing the Battery).

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Hard Drive

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 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 WARNING: If you remove the hard drive from the computer when the drive is hot, do not touch the metal housing of the hard drive.

 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell is not covered by your warranty.

 CAUTION: To prevent data loss, turn off your computer (see Turning Off Your Computer) before removing the hard drive. Do not remove the hard drive while the computer is On or in Sleep state.

 CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

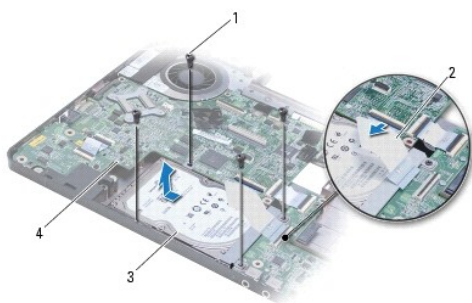
 CAUTION: When the hard drive is not in the computer, store it in protective antistatic packaging (see "Protecting Against Electrostatic Discharge" in the safety instructions that shipped with your computer).

 CAUTION: Hard drives are extremely fragile. Exercise care when handling the hard drive.

NOTE: Dell does not guarantee compatibility or provide support for hard drives from sources other than Dell.

NOTE: If you are installing a hard drive from a source other than Dell, you need to install an operating system, drivers, and utilities on the new hard drive (see the *Dell Technology Guide*).

Removing the Hard Drive

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the optical drive (see Removing the Optical Drive).
4. Remove the module cover (see Removing the Module Cover).
5. Remove the Mini-Card (see Removing the Mini-Card).
6. Remove the power button cover (see Removing the Power Button Cover).
7. Remove the keyboard (see Removing the Keyboard).
8. Remove the palm rest (see Removing the Palm Rest).
9. Disconnect the USB/audio cable from the system board.
10. Remove the four screws that secure the hard drive assembly to the computer base.
11. Slide and lift the hard drive assembly out of the computer base.

1	screws (4)	2	USB/audio cable
3	hard drive assembly	4	system board

12. Remove the four screws that secure the hard drive to the hard drive bracket.

13. Remove the hard drive.

1	screws (4)	2	hard drive bracket
3	hard drive		

Replacing the Hard Drive

1. Remove the new hard drive from its packaging.
   Save the original packaging for storing or shipping the hard drive.

2. Place the hard drive in the hard drive bracket and replace the four screws that secure the hard drive bracket to the hard drive.

3. Slide the hard drive assembly into the computer base until it is fully seated.

4. Replace the four screws that secure the hard drive assembly to the computer base.

5. Connect the USB/audio cable to the USB/audio board.

6. Replace the palm rest (see Replacing the Palm Rest).

7. Replace the keyboard (see Replacing the Keyboard).

8. Replace the power button cover (see Replacing the Power Button Cover).

9. Replace the Mini-Card (see Replacing the Mini-Card).

10. Replace the module cover (see Replacing the Module Cover).

11. Replace the optical drive (see Replacing the Optical Drive).

12. Replace the battery (see Replacing the Battery).

13. Install the operating system for your computer, as needed. See "Restoring Your Operating System" in the *Setup Guide*.

14. Install the drivers and utilities for your computer, as needed. For more information, see the *Dell Technology Guide*.

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Keyboard

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 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

 CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

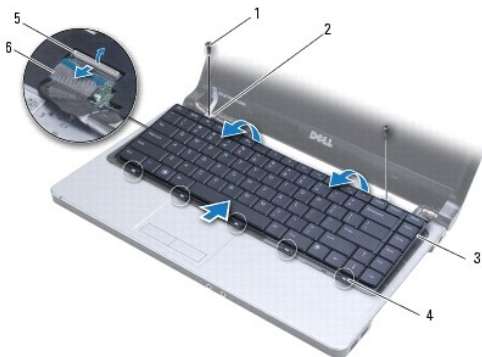
 CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Keyboard

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the power button cover (see Removing the Power Button Cover).
4. Remove the two screws that secure the keyboard to the palm rest.
5. Use the metal tabs along the top edge of the keyboard to lift it up at an angle, then ease the keyboard tabs along the bottom of the keyboard out of the palm rest.

CAUTION: The keycaps on the keyboard are fragile, easily dislodged, and time-consuming to replace. Be careful when removing and handling the keyboard.

CAUTION: Be extremely careful when removing and handling the keyboard. Failure to do so could result in scratching the display panel.

6. Lift the connector latch on the keyboard cable to disconnect it from the connector on the system board.
7. Lift the keyboard off the palm rest.

1	screws (2)	2	metal tabs (2)
3	keyboard	4	keyboard tabs (5)
5	latch on connector	6	keyboard cable

Replacing the Keyboard

1. Slide the keyboard cable into the connector on the system board. Press down on the connector latch to secure the keyboard cable to the system board.
2. Place the tabs along the bottom of the keyboard into the palm rest, then lower the keyboard snap it into place.
3. Replace the two screws that secure the keyboard to the palm rest.
4. Replace the power button cover (see Replacing the Power Button Cover).
5. Replace the battery (see Replacing the Battery).

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Memory Module(s)

Dell™ Inspiron™ 1470/1570 Service Manual

 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on the back of the computer).

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

You can increase your computer memory by installing memory modules on the system board. See "Basic Specifications" in your *Setup Guide* and "Comprehensive Specifications" on **support.dell.com/manuals** for information on the memory supported by your computer.

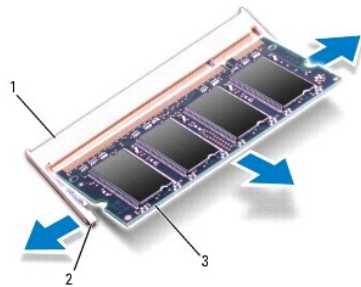
 NOTE: Memory modules purchased from Dell™ are covered under your computer warranty.

Your computer has two user-accessible SODIMM sockets, DIMM A and DIMM B, accessed from the bottom of the computer.

Removing the Memory Module(s)

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the module cover (see Removing the Module Cover).

CAUTION: To prevent damage to the memory module connector, do not use tools to spread the memory module securing clips.

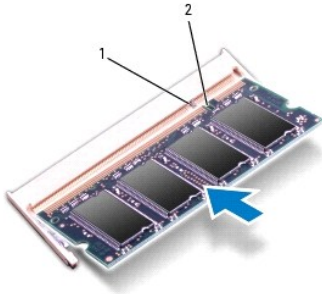
4. Use your fingertips to carefully spread apart the securing clips on each end of the memory module connector until the module pops up.
5. Remove the memory module from the memory module connector.

1	memory module connector	2	securing clips (2)
3	memory module		

Replacing the Memory Module(s)

CAUTION: If you need to install memory modules in two connectors, install a memory module in the connector labeled "DIMM A" before you install a memory module in the connector labeled "DIMM B."

1. Align the notch in the memory module with the tab in the memory module connector.

2. Slide the memory module firmly into the slot at a 45-degree angle, and press the memory module down until it clicks into place. If you do not hear the click, remove the memory module and reinstall it.

NOTE: If the memory module is not installed properly, the computer may not boot.

1	tab	2	notch

3. Replace the module cover (see Replacing the Module Cover).

4. Replace the battery (see Replacing the Battery). Connect the AC adapter to your computer and an electrical outlet.

5. Turn on the computer.

As the computer boots, it detects the memory module and automatically updates the system configuration information.

To confirm the amount of memory installed in the computer, click → **Help and Support**→ **Dell System Information**.

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Wireless Mini-Card

Dell™ Inspiron™ 1470/1570 Service Manual

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

CAUTION: When the Mini-Card is not in the computer, store it in protective antistatic packaging (see "Protecting Against Electrostatic Discharge" in the safety instructions that shipped with your computer).

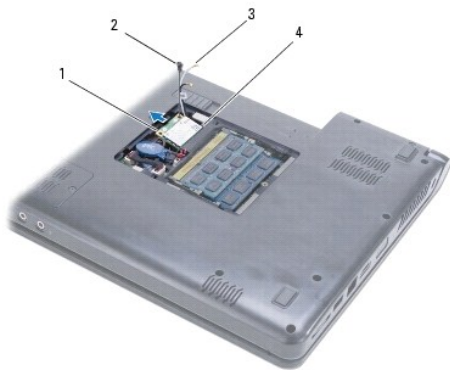
NOTE: Dell does not guarantee compatibility or provide support for Mini-Cards from sources other than Dell.

NOTE: Depending on the configuration of the computer when it was sold, the Mini-Card slot may or may not have a Mini-Card installed in the slot.

If you ordered a wireless Mini-Card with your computer, the card is already installed.

Your computer supports one half Mini-Card slot for Wireless Local Area Network (WLAN).

Removing the Mini-Card

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the module cover (see Removing the Module Cover).
4. Disconnect the antenna cables from the Mini-Card.

1	Mini-Card	2	screw
3	antenna cable connectors (2)	4	system board connector

5. Remove the screw that secures the Mini-Card to the system board.
6. Remove the Mini-Card from the system board connector.

Replacing the Mini-Card

1. Remove the new Mini-Card from its packaging.

CAUTION: Use firm and even pressure to slide the card into place. If you use excessive force, you may damage the connector.

CAUTION: The connectors are keyed to ensure correct insertion. If you feel resistance, check the connectors on the card and on the system board, and realign the card.

CAUTION: To avoid damage to the Mini-Card, never place cables under the card.

2. With the label on the Mini-Card facing up, insert it into the system board connector at a 45-degree angle.

3. Replace the screw that secures the Mini-Card to the system board.

4. Connect the antenna cables to the Mini-Card as follows:

   - Connect the white cable to the connector with the white triangle.
   - Connect the black cable to the connector with the black triangle.

5. Replace the module cover (see Replacing the Module Cover).

6. Replace the battery (see Replacing the Battery).

7. Install the drivers and utilities for your computer, as required. For more information, see the *Dell Technology Guide*.

NOTE: If you are installing a communication card from a source other than Dell, you must install the appropriate drivers and utilities. For more generic driver information, see the *Dell Technology Guide*.

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Optical Drive

Dell™ Inspiron™ 1470/1570 Service Manual

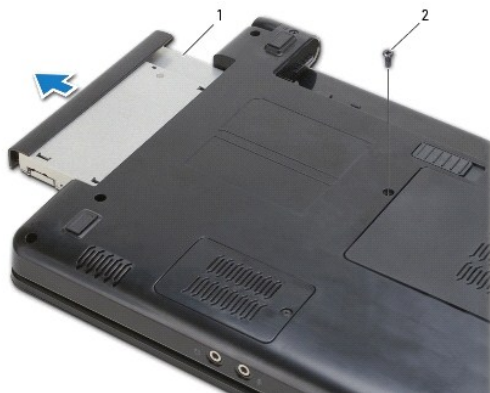
 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Optical Drive

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the screw that secures the optical drive to the computer base.
4. Slide the optical drive out of the optical drive bay.

1	optical drive	2	screw

Replacing the Optical Drive

1. Slide the optical drive into the optical drive bay until it is fully seated.
2. Replace the screw that secures the optical drive to the computer base.
3. Replace the battery (see Replacing the Battery).

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Palm Rest

Dell™ Inspiron™ 1470/1570 Service Manual

 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

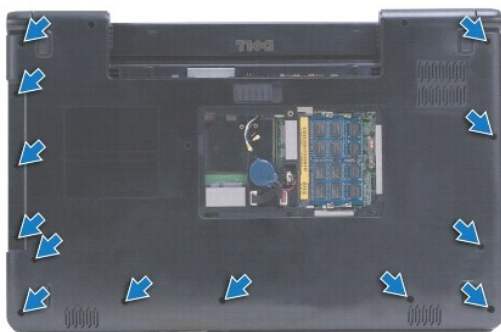
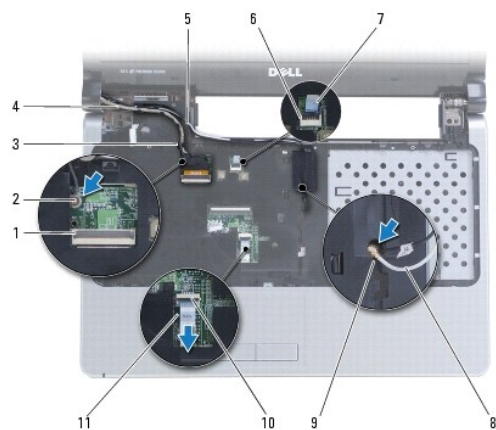
 CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

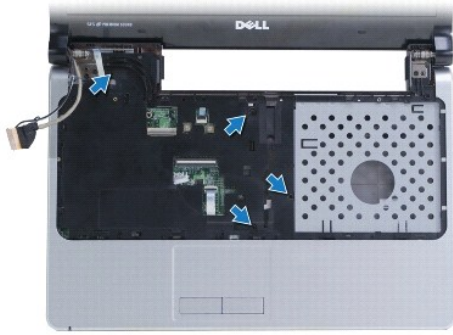
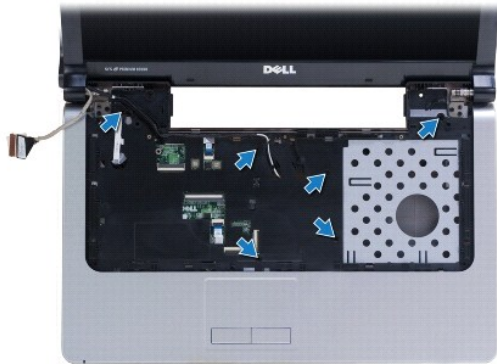
 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

 CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Palm Rest

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the optical drive (see Removing the Optical Drive).
4. Remove the module cover (see Removing the Module Cover).
5. Remove the Mini-Card (see Removing the Mini-Card).
6. Remove the power button cover (see Removing the Power Button Cover).
7. Remove the keyboard (see Removing the Keyboard).
8. For the Inspiron 1470:
   a. Loosen the captive screw on the WWAN/FCM cover and remove it.
   b. Remove twelve screws from the computer base. One screw is located in the slot labeled WWAN/FCM, and three screws are located in the optical drive bay.

For the Inspiron 1570, remove thirteen screws from the computer base. Three screws are located in the optical drive bay.

9. Disconnect the display cable and remove the screw from the system board.
10. Pull the Mini-Card antenna cables up through the slot in the computer base.
11. Note the routing of the cables and remove them from their routing guides.
12. Disconnect the touch pad cable and the power button cable from the system board.

1	display cable connector	2	screw
3	display cable routing guides	4	display cable
5	Mini-Card antenna cables routing guides	6	power button connector
7	power button cable	8	Mini-Card antenna cables
9	slot in computer base	10	touch pad connector
11	touch pad cable		

13. For the Inspiron 1470, remove four screws on the palm rest.

For the Inspiron 1570, remove six screws on the palm rest.

CAUTION: Carefully separate the palm rest from the computer base to avoid damage to the palm rest.

14. Starting with the right side of the palm rest, carefully pull up to disengage the tabs on the palm rest from the computer base.

Replacing the Palm Rest

1. Align the palm rest on the computer base and gently snap the palm rest into place.
2. Replace the screws on the palm rest.
3. Connect the touch pad cable and the power button cable to the system board.
4. Route the Mini-Card antenna cables and display cable through their routing guides.
5. Thread the Mini-Card antenna cables through the slot in the computer base.
6. Connect the display cable and replace the screw.
7. Replace the keyboard (see Replacing the Keyboard).
8. Replace the power button cover (see Replacing the Power Button Cover).
9. Replace the screws on the bottom of the computer.
10. Replace the WWAN/FCM cover on the Inspiron 1470.
11. Replace the Mini-Card (see Replacing the Mini-Card).
12. Replace the module cover (see Replacing the Module Cover).
13. Replace the optical drive (see Replacing the Optical Drive).

14. Replace the battery (see Replacing the Battery).

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Power Button Cover

Dell™ Inspiron™ 1470/1570 Service Manual

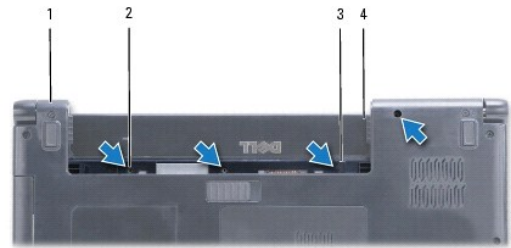
 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

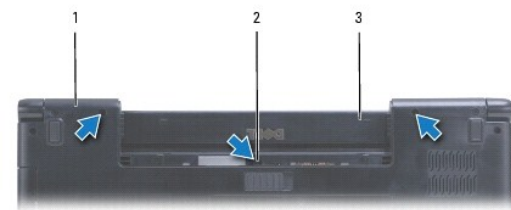
CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Power Button Cover

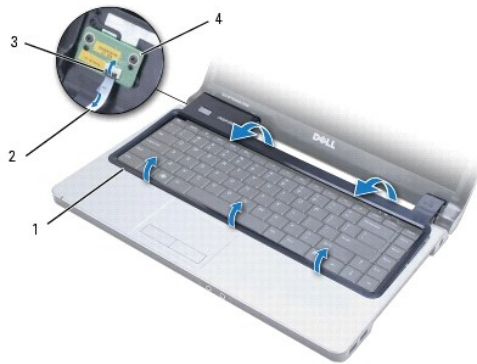
1. Follow the procedure in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. For the Inspiron 1470, remove three screws in the battery bay and remove one screw from the computer base.

1	computer base	2	screws (4)
3	latch hook	4	battery bay

For the Inspiron 1570, remove one screw in the battery bay and remove two screws from the computer base.

1	computer base	2	screws (3)
3	battery bay		

4. Turn the computer top-side up, and open it as far as possible.

CAUTION: Be extremely careful when removing the power button cover. The cover is very fragile.

5. Carefully pry up the power button cover, disengaging the tabs on the cover from the computer.

6. Lift the latch on the connector to disconnect the power button cable from the power button board.

1	power button cover	2	power button cable
3	connector latch	4	power button board

Replacing the Power Button Cover

1. Place the power button cable into the connector, then close the latch to secure the cable to the power button board.
2. Place the power button cover on the computer and carefully snap the cover into place.
3. Close the computer and turn it upside down.
4. Replace the screws in the computer base and the battery bay.
5. Replace the battery (see Replacing the Battery).

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Speakers

Dell™ Inspiron™ 1470/1570 Service Manual

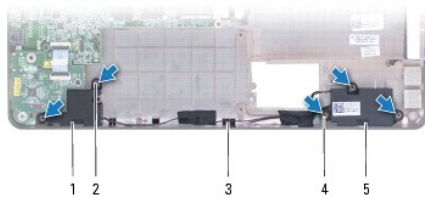
 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

 CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Speakers

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the optical drive (see Removing the Optical Drive).
4. Remove the module cover (see Removing the Module Cover).
5. Remove the Mini-Card (see Removing the Mini-Card).
6. Remove the power button cover (see Removing the Power Button Cover).
7. Remove the keyboard (see Removing the Keyboard).
8. Remove the palm rest (see Removing the Palm Rest).
9. Remove the hard drive (Removing the Hard Drive).
10. Remove the USB/audio board (Removing the USB/Audio Board).
11. Remove two screws from the left speaker and three screws from the right speaker.
12. Note the routing of the speaker cables, and remove the speakers while carefully removing the speaker cables from their routing guides.

1	left speaker	2	screws on left speaker (2)
3	speaker cable routing guide	4	screws on right speaker (3)
5	right speaker		

Replacing the Speakers

1. Place the speakers in the computer base.

2. Route the speaker cables.
3. Replace three screws on the right speaker and two screws on the left speaker.
4. Replace the USB/audio board (see Replacing the USB/Audio Board).
5. Replace the hard drive (see Replacing the Hard Drive).
6. Replace the palm rest (see Replacing the Palm Rest).
7. Replace the keyboard (see Replacing the Keyboard).
8. Replace the power button cover (see Replacing the Power Button Cover).
9. Replace the Mini-Card (see Replacing the Mini-Card).
10. Replace the module cover (see Replacing the Module Cover).
11. Replace the optical drive (see Replacing the Optical Drive).
12. Replace the battery (see Replacing the Battery).

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System Board

Dell™ Inspiron™ 1470/1570 Service Manual

 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

1. Remove the palm rest (see Removing the Palm Rest).
2. Remove the hard drive (Removing the Hard Drive).

Removing the System Board

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the optical drive (see Removing the Optical Drive).
4. Remove the module cover (see Removing the Module Cover).
5. Remove the memory module(s) (see Removing the Memory Module(s)).
6. Disconnect the USB/audio cable under the module cover that is connected to the system board and USB/audio board.

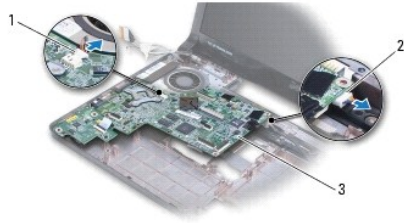
1	cable

7. Remove the Mini-Card (see Removing the Mini-Card).
8. Remove the coin-cell battery (see Removing the Coin-Cell Battery).
9. Remove the power button cover (see Removing the Power Button Cover).
10. Remove the keyboard (see Removing the Keyboard).
11. Remove the palm rest (see Removing the Palm Rest).

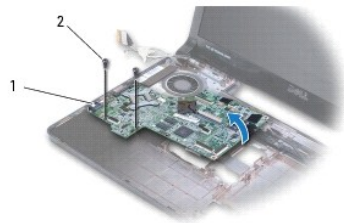
12. Remove the hard drive (see Removing the Hard Drive).

13. Remove the USB/audio board (Removing the USB/Audio Board).

14. Remove the card reader board (see Removing the Card Reader Board).

15. Disconnect the power cable and the fan cable from the system board.

1	fan cable	2	power cable
3	system board		

16. Remove the two screws that secure the system board to the computer base.

17. Lift the system board up at an angle to ease the I/O connectors out from the computer base.

1	I/O connectors (4)	2	screws (2)

18. Turn the system board over.

19. Remove the processor heat sink (see Removing the Processor Heat Sink).

Replacing the System Board

1. Replace the processor heat sink (see Replacing the Processor Heat Sink).

2. Turn the system board over.

3. Place the I/O connectors into the computer base at and angle, then align the system board using the alignment posts on the computer base.

4. Replace the two screws that secure the system board to the computer base.

5. Connect the fan cable and the power cable to the system board.

6. Replace the card reader board (see Replacing the Card Reader Board).

7. Replace the USB/audio board (Replacing the USB/Audio Board).

8. Replace the hard drive (see Replacing the Hard Drive).

9. Replace the palm rest (see Replacing the Palm Rest).

10. Replace the coin-cell battery (see Replacing the Coin-Cell Battery).

11. Replace the Mini-Card (see Replacing the Mini-Card).

12. Connect the USB/audio cable under the module cover that is connected to the system board and USB/audio board.

13. Replace the memory module(s) (see Replacing the Memory Module(s)).

14. Replace the module cover (see Replacing the Module Cover).

15. Replace the optical drive (see Replacing the Optical Drive).

16. Replace the battery (see Replacing the Battery).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

17. Turn on the computer.

NOTE: After you have replaced the system board, enter the computer's Service Tag into the BIOS of the replacement system board.

18. Enter the service tag (see Entering the Service Tag in the BIOS).

Entering the Service Tag in the BIOS

1. Ensure that the AC adapter is plugged in and that the main battery is installed properly.

2. Turn on the computer.

3. Press <F2> during POST to enter the system setup program.

4. Navigate to the security tab and enter the service tag in the **Set Service Tag** field.

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Dell™ Inspiron™ 1470/1570 Service Manual

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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USB/Audio Board

Dell™ Inspiron™ 1470/1570 Service Manual

 WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

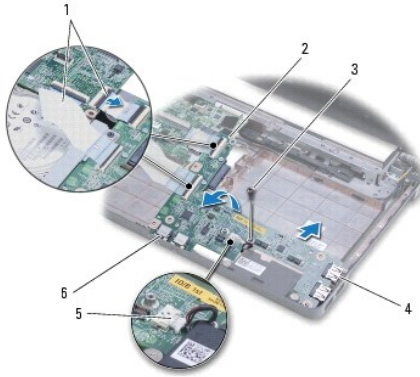
CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

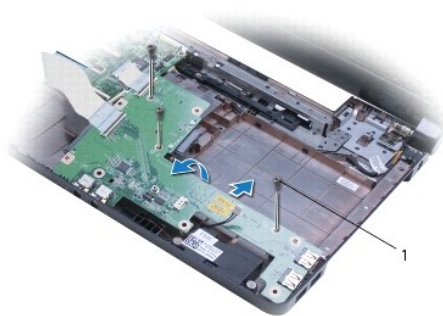
CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the USB/Audio Board

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the optical drive (see Removing the Optical Drive).
4. Remove the module cover (see Removing the Module Cover).
5. Disconnect the cable under the module cover that is connected to the system board and USB/audio board.
6. Remove the Mini-Card (see Removing the Mini-Card).
7. Remove the power button cover (see Removing the Power Button Cover).
8. Remove the keyboard (see Removing the Keyboard).

1	USB/audio cable

9. Remove the palm rest (see Removing the Palm Rest).
10. Remove the Bluetooth card (see Removing the Bluetooth Card).
11. Remove the hard drive (Removing the Hard Drive).
12. Disconnect the USB/audio cable from the system board.
13. Disconnect the speaker cable from the USB/audio board.
14. For the Inspiron 1470, remove the screw that secures the USB/audio board to the computer base.

1	USB/audio cables (2)	2	USB/audio board
3	screw (Inspiron 1470)	4	USB connectors (2)
5	speaker cable	6	audio connectors (2)

For the Inspiron 1570 model, remove the three screws that secure the USB/audio board to the computer base.

1	screws (3) (Inspiron 1570)

15. Lift the USB/audio board and ease the USB and audio connectors out of the computer base.

Replacing the USB/Audio Board

1. Place the USB connectors, then the audio connectors into the computer base.
2. Align the USB/audio board using the alignment posts on the computer base.
3. Replace the screw(s) that secure the USB/audio board to the computer base.
4. Connect the speaker cable to the USB/audio board.
5. Connect the two USB/audio cables to the system board.
6. Replace the hard drive (see Replacing the Hard Drive).
7. Replace the Bluetooth card (see Replacing the Bluetooth Card).
8. Replace the palm rest (see Replacing the Palm Rest).
9. Replace the keyboard (see Replacing the Keyboard).
10. Replace the power button cover (see Replacing the Power Button Cover).

11. Replace the Mini-Card (see Replacing the Mini-Card).

12. Connect the cable under the module cover that is connected to the system board and USB/audio board.

13. Replace the module cover (see Replacing the Module Cover).

14. Replace the optical drive (see Replacing the Optical Drive).

15. Replace the battery (see Replacing the Battery).

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